

Est.
1841

YORK
ST JOHN
UNIVERSITY

Hill, Andrew P. ORCID logoORCID:
<https://orcid.org/0000-0001-6370-8901>, Hall, Howard and Appleton,
Paul R. (2011) The relationship between multidimensional
perfectionism and contingencies of self-worth. *Personality and
Individual Differences*, 50 (2). 238 - 242.

Downloaded from: <https://ray.yorks.ac.uk/id/eprint/696/>

The version presented here may differ from the published version or version of record. If
you intend to cite from the work you are advised to consult the publisher's version:

<http://www.sciencedirect.com/science/article/pii/S0191886910004794>

Research at York St John (RaY) is an institutional repository. It supports the principles of
open access by making the research outputs of the University available in digital form.
Copyright of the items stored in RaY reside with the authors and/or other copyright
owners. Users may access full text items free of charge, and may download a copy for
private study or non-commercial research. For further reuse terms, see licence terms
governing individual outputs. [Institutional Repository Policy Statement](#)

RaY

Research at the University of York St John

For more information please contact RaY at ray@yorks.ac.uk

1 Hill, A. P., Hall, H. K., & Appleton, P. R. (2011). The relationship between
2 multidimensional perfectionism and contingencies of self-worth. *Personality and*
3 *Individual Differences, 50*, 238-242.

3

4

5

6 The relationship between multidimensional perfectionism and contingencies of
7 self-worth

8

9 Andrew P. Hill¹, Howard K. Hall¹, & Paul R. Appleton²

10 ¹York St. John University, UK

11 ²University of Bedfordshire, UK

12

13 Running head: Perfectionism and self-worth

14 Keywords: motivation, achievement striving

15

16

17 Andrew P. Hill, PhD

18 Faculty of Health and Life Sciences

19 York St. John University

20 Lord Mayor's Walk

21 York, YO31 7EX

22 UK

23 e-mail: a.hill1@yorks.ac.uk

24 Tel: 01904-876707

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

Abstract

Research suggests that while socially prescribed perfectionism has a robust association with psychological difficulties, self-oriented perfectionism may be best considered a vulnerability factor (Hewitt & Flett, 1991; Flett & Hewitt, 2007). One explanation for their divergent consequences is that these dimensions of perfectionism are underpinned by different contingencies of self-worth. The purpose of the current study was to examine this possibility. Two-hundred and forty-eight undergraduate students (age $M = 19.08$, $SD 2.36$, range 18-49) completed measures of perfectionism (self-oriented and socially prescribed) and contingencies of self-worth (based on outperforming others, approval of others, and personal competence). Consistent with the hypotheses, regression analyses revealed that socially prescribed perfectionism was predicted by contingencies of self-worth based on outperforming others and the approval of others, whereas self-oriented perfectionism was predicted by contingencies of self-worth based on outperforming others and personal competence. The results suggest that the nature of the contingencies of self-worth associated with these dimensions of perfectionism may be important when considering their relationship with psychological maladjustment.

1

2 The relationship between multidimensional perfectionism and contingencies of
3 self-worth

4 Perfectionism is a multidimensional personality trait that entails an array
5 of interpersonal and intrapersonal dimensions that have a considerable impact on
6 psychological adjustment (e.g., Enns, Cox, Sareen, & Freeman, 2001; Rice &
7 Lapsley, 2001; Rice, Vergara, & Mirela, 2006). Hewitt and Flett (1991) have
8 developed a model of perfectionism that distinguishes between dimensions of
9 perfectionism based on the perceived origins and focus of perfectionistic
10 standards. Socially prescribed perfectionism is the belief that significant others
11 impose extremely high and unrealistic standards on the self and that approval is
12 contingent on their achievement. Self-oriented perfectionism is the tendency to set
13 exceedingly high personal standards and evaluate oneself critically. Research
14 suggests that these dimensions have divergent consequences. While socially
15 prescribed perfectionism appears to be uniformly debilitating, self-oriented
16 perfectionism appears to be best considered a vulnerability factor (Hewitt & Flett,
17 1991; Flett & Hewitt, 2007). For example, socially prescribed perfectionism is
18 positively related with distress, hopelessness, depression, and suicide ideation,
19 whereas the relationship between self-oriented perfectionism and these variables
20 is weak, inconsistent, or only apparent through an interaction with third-order
21 variables (e.g., stress, coping, and socially prescribed perfectionism) (e.g.,
22 Blankstein, Lumley, & Crawford, 2007; O'Connor & O'Connor, 2003; Sherry,
23 Hewitt, Flett, & Harvey, 2003).

1 Proposed explanations for the distinct consequences of self-oriented and
2 socially prescribed perfectionism include disparity in terms of self-critical
3 tendencies (Gilbert, Durrant, & McEwan, 2006; Trimpeter, Watson, & O' Leary,
4 2006), perceptions of control (Flett, Hewitt, Blankstein, & Mosher, 1995), and
5 coping tendencies (Hewitt & Flett, 1996). A further explanation is that self-
6 oriented and socially prescribed perfectionism entail different beliefs about the
7 relationship between accomplishment and feelings of self-worth. The prominence
8 of a conditional sense of self-worth is evident in conceptualisations of both self-
9 oriented and socially prescribed perfectionism. Self-oriented perfectionism
10 involves the belief that *self*-acceptance is based on the attainment of exceedingly
11 high *personal* standards. In contrast, socially prescribed perfectionism involves
12 the belief that *self* and *other*-acceptance is contingent upon the attainment of
13 exceedingly high standards that are *externally* imposed by others. Empirical
14 findings have confirmed the positive association between these dimensions of
15 perfectionism and conditional sense of self-acceptance and self-worth.
16 Furthermore, this research also suggests that conditional acceptance and worth are
17 significant sources of the psychological and emotional difficulties associated with
18 these dimensions of perfectionism (e.g., Flett, Besser, Davis, & Hewitt, 2003;
19 Flett, Russo, & Hewitt, 1994; Hill, Hall, Appleton & Kozub, 2008; Stoeber,
20 Kempe & Keogh, 2008; Sturman, Flett, Hewitt, & Rudolph, 2009).

21 The notion that conditional self-acceptance and self-worth provides the
22 basis for psychological difficulties is central to a number of approaches to the
23 examination of self-worth in social and counselling psychology (e.g., Deci &
24 Ryan, 1995; Ellis, 2003; Kernis, 2003; Rogers, 1996). Deci and Ryan (1995)

1 defined contingent self-worth as worth based upon the attainment of generalised
2 inter-personal or intra-psychic expectations. In contrast, non-contingent self-worth
3 (or true self-worth) is described as self-worth that is secure and independent of the
4 attainment of these generalised inter-personal or intra-psychic expectations.
5 According to these models, whether self-worth is contingent or not is a general
6 quality that strongly influences psychological and emotional adjustment (see
7 Kernis, 2003). From this perspective, self-oriented and socially prescribed
8 perfectionism both lead to psychological difficulties because they are associated
9 with contingent, as opposed to non-contingent, self-worth. However, this
10 approach does not explain why contingent self-worth manifests in different
11 consequences depending on the dimension of perfectionism.

12 Crocker and colleagues (Crocker, Luhtanen, Cooper, & Bouvrett, 2003;
13 Crocker & Park, 2004; Crocker & Wolfe, 2001) provide a model that
14 differentiates between the consequences of contingent self-worth. In contrast to
15 emphasising between-person differences in contingent or non-contingent self-
16 worth, their approach considers the domains in which worth is contingent.
17 Contingencies of worth are the domains in which self-esteem is staked, enhanced
18 and threatened (Crocker et al., 2003). Although contingencies of self-worth are
19 likely to be wide and varied, Crocker and colleagues (Crocker et al., 2003;
20 Crocker & Park, 2004; Crocker & Wolfe, 2001) have identified a number of
21 common and important contingencies of worth that include personal
22 competencies, inter-personal competition, approval of others, family affection,
23 physical appearance, God's love and virtue. Attempts to satisfy contingencies of
24 self-worth are associated with personal and interpersonal costs such as thwarting

1 psychological needs and poorer mental and physical health (see Crocker & Park,
2 2004). However, from this perspective, some contingencies are considered to be
3 more divisive than others. In particular, contingencies that involve external
4 validation (e.g., approval of others) are associated with greater psychological
5 maladjustment than those that can be internally referenced (e.g., personal
6 competence) (see Crocker, 2002; Crocker & Park, 2004).

7 The potential similarities and differences between self-oriented and
8 socially prescribed perfectionism in terms of the underlying contingencies of
9 worth is evident in extant research. Both self-oriented and socially prescribed
10 perfectionism have been found to be related to performance goals that entail the
11 belief that demonstrating comparative ability defines personal success (e.g., Van
12 Yperen, 2006; Spiers Neumeister & Finch, 2006). Consequently, both self and
13 socially prescribed perfectionism are likely to include the desire to establish a
14 sense of self-worth through superior performance in inter-personal competition.
15 However, unlike self-oriented perfectionism, socially prescribed-perfectionism is
16 also likely to be associated with contingencies that pertain to the importance of
17 the acceptance of others (e.g., others approval). This is because this interpersonal
18 dimension of perfectionism is purported to partly reflect a neurotic need to please
19 others (Hewitt & Flett, 1991). In accord, previous research has demonstrated that
20 this dimension of perfectionism is associated with a strong desire for approval and
21 a fear of negative evaluation (Hewitt & Flett, 1991). Self-oriented perfectionism,
22 on the other hand, is more likely to be associated with contingencies that pertain
23 to personal competencies (e.g., academic competence, sport competence) because
24 of the intrapersonal nature of the standards associated with this dimension (Hewitt

1 Multidimensional Perfectionism Scale (MPS). The third dimension measured by
2 this scale, other-oriented perfectionism (OOP), entails beliefs about the
3 performances of others and was therefore not included in the study. The two
4 subscales of the MPS each contain 15-items measured on a seven-point Likert
5 scale (1 = *strongly disagree* to 7 = *strongly agree*). Responses on the self-
6 oriented perfectionism subscale reflect excessive striving for high personal
7 standards and self-critical tendencies (e.g., “I demand nothing less than perfection
8 of myself.”). In contrast, responses to the socially prescribed perfectionism
9 subscale reflect the belief that significant others have exceedingly high standards
10 and that acceptance is based on the attainment of those standards (e.g., “The
11 people around me expect me to succeed at everything I do.”). Evidence to support
12 the validity and reliability of measurement associated with the scale has been
13 provided by Hewitt and Flett (1991, 2004). This evidence includes good internal
14 consistency ($\alpha = \text{SOP } .89$ and $\alpha = \text{SPP } .86$) and test-retest reliability for these
15 scales ($r = \text{SOP } .88$ and $r = \text{SPP } .75$) in student and general samples (Hewitt &
16 Flett, 1991).

17 *Contingences of self-worth:* Self-worth contingent on the approval of
18 others and outperforming others was measured using two subscales from Crocker
19 et al.’s (2003) Contingencies of Self-Worth Scale. Both the approval from
20 generalised others subscale (OA) (e.g., “My self-esteem depends on the opinions
21 others hold of me.” “I can’t respect myself if others don’t respect me.”) and the
22 competition subscale (C) (e.g., “My self-worth is affect by how well I do when
23 competing with others.” “Knowing that I am better than others on a task raises my
24 self-esteem.”) contain 5 items. Each is scored on a seven-point Likert scale (1 =

1 *strongly disagree* to 7 = *strongly agree*). Crocker et al. (2003) have provided
2 evidence to support the validity and the reliability of the measurement associated
3 with the two subscales of the Contingencies of Self-Worth Scale. This includes
4 good factor stability, internal consistency ($\alpha = \text{OA} .82$ and $\alpha = \text{C} .87$) and test-
5 retest reliability ($r = \text{OA} .61$ and $r = \text{C} .61$). Self-worth contingent on a general
6 sense of personal competence (PC) was using 5 items from Kernis and Paradise's
7 (Kernis, 2003; Paradise & Kernis, 1999) Contingent Self-Esteem Scale ("An
8 important measure of my worth is how competently I perform." "Even in the face
9 of failure, my feelings of self-worth remain unaffected." [reversed] "A big
10 determinant of how much I like myself is how well I perform up to the standards
11 that I have set for myself." "An important measure of my worth is how well I
12 perform up to the standards that other people have set for me." "When my actions
13 do not live up to my expectations, it makes me feel dissatisfied with myself.").
14 The items are scored on a five-point Likert scale (1 = *not at all like me* to 5 = *very*
15 *much like me*). Evidence of the reliability and validity of the measurement
16 associated with the Contingent Self-Esteem Scale has been provided by those that
17 have used the scale (Knee, Canevello, Bush, & Cook, 2008; Patrick, Neighbors, &
18 Knee, 2004). This includes acceptable levels of internal consistency ($\alpha = .85$) and
19 test-retest reliability ($r = .77$) (Kernis, 2003; Paradise & Kernis, 1999).

20 Results

21 *Preliminary analysis*

22 Prior to the main analyses, a missing value analysis was conducted on the
23 data. Due to large amounts of missing data from individual respondents (> 5%),
24 six participants were removed from the sample. There were 203 complete cases

1 and 39 cases with incomplete data. For those with incomplete data, the average
2 number of missing items was 1.15 ($SD = 0.37$, range 1 to 2). There were 24
3 unique patterns of missing data. Because there was a relatively high ratio of
4 unique patterns of missing data to the number of participants with missing data (= $.62$), and the majority of the shared patterns involved one or two missing items
5 (79%), the mechanism that underpins the missing data was presumed to be non-
6 systematic. Each missing item was therefore replaced using the mean of the each
7 case's available non-missing items from the relevant subscale. This method of
8 imputation is considered to be an appropriate strategy when the amount of missing
9 data is low and items are highly correlated (Graham, Cumsille & Elek-Fisk,
10 2003).
11

12 Next, the data was screened for univariate outliers (see Tabachnick &
13 Fidell, 2007). Standardised z-scores larger than 3.29 ($p < .001$, two-tailed) were
14 used as criteria for univariate outliers. This led to the removal of one participant.
15 Two further participants were removed as they were clear outliers but fell
16 marginally outside the cut-off value (zscore = 3.27). The remaining data ($n = 239$)
17 was considered to be approximately univariate normal (absolute skewness $M =$
18 0.82 , $SD = 0.31$, $SE = 0.16$, absolute kurtosis $M = 0.70$, $SD = 0.56$, $SE = 0.31$).
19 Finally, internal reliability analysis (Cronbach's alpha) was performed on each
20 scale. All instruments demonstrated sufficient internal consistency ($\alpha \geq .70$ for
21 scales with 10 items or more and $\alpha \geq .60$ for scales with 5 items or more;
22 Loewenthal, 2001). The values are displayed in Table 1.

23 *Descriptive Analyses*

1 The descriptive statistics displayed in Table 1 indicate that participants
2 scored moderate-to-high levels of self-oriented perfectionism and low-to-
3 moderate levels of socially prescribed perfectionism (Likert scale 1-7). The
4 reported mean scores for the contingencies of self-worth scales indicated that
5 personal competence was the greatest source of self-worth, followed by
6 outperforming others and the approval of others. The size and pattern of these
7 mean scores are similar to those reported elsewhere (e.g., Crocker et al., 2002).
8 *Regression analysis examining the ability of contingencies of self-worth to predict*
9 *dimensions of perfectionism*

10 Regression analyses were used to examine whether different contingencies
11 of worth predict self-oriented and socially prescribed perfectionism. Preliminary
12 analysis indicated that multicollinearity between variables were unproblematic
13 (tolerance). There was a lack of autocorrelation (regression one [SPP] Durbin-
14 Watson = 1.94, tolerance = .66 to .84, and regression two [SOP] Durbin-Watson =
15 2.14, tolerance = .66 to .84) and residuals were normally distributed and
16 homoscedastic (based on standardised predicted values-standardised residuals
17 plots). The results of the regression analyses are displayed in Table 2. Socially
18 prescribed perfectionism was predicted by contingencies of self-worth based on
19 outperforming others and the approval of others, but not by self-worth contingent
20 on personal competence. Self-oriented perfectionism was predicted by
21 contingencies of self-worth based on outperforming others and personal
22 competence, but not by self-worth contingent on the approval of others.

23

Discussion

1 Research has demonstrated the divergent consequences of self-oriented
2 and socially prescribed perfectionism. One explanation is that these differences
3 reflect different underlying contingencies of self-worth. The purpose of the
4 current study was to examine this possibility. Utilising Crocker and colleagues
5 (Crocker, 2002; Crocker et al., 2002) model of contingencies of self-worth, it was
6 hypothesised that self-oriented perfectionism would be predicted by contingencies
7 of self-worth based on outperforming others and personal competence, whereas
8 socially prescribed perfectionism would be predicted by contingencies of self-
9 worth based on outperforming others and the approval of others. Regression
10 analyses supported these hypotheses.

11 *Similarities between self-oriented and socially prescribed perfectionism*

12 Contingent self-worth is believed to be a source of the psychological
13 difficulties associated with both self-oriented perfectionism and socially
14 prescribed (e.g., Flett et al., 2004; Hill et al., 2008; Scott, 2007). The findings of
15 the current study suggest that these dimensions of perfectionism are underpinned
16 by common as well as distinct contingencies of worth. Outperforming others
17 (competition) is a source of self-worth for both self-oriented and socially
18 prescribed perfectionism. This is consistent with research that has found that the
19 demonstration of comparative ability is central to the manner in which success is
20 defined for both of these dimensions of perfectionism (e.g., Van Yperen, 2006;
21 Spiers Neumeister, & Finch, 2006). Individuals with higher levels of either of
22 these dimensions of perfectionism are therefore unlikely to be comfortable with
23 perceptions of parity with others and may experience personal and interpersonal
24 difficulties as a consequence (Rosenberg, 1965).

1 *Differences between self-oriented and socially prescribed perfectionism*

2 While self-oriented and socially prescribed perfectionism share an
3 association with contingent self-worth based on outperforming others, they were
4 also characterised by distinct contingencies of self-worth. Self-oriented
5 perfectionism was associated with a generalised competence based contingency of
6 self-worth but not the approval of others based contingency of self-worth.
7 Interestingly, the purported costs associated with competence based contingencies
8 include the possibility of experiencing learning and performance deficits. This is
9 primarily because defensive strategies aimed at maintaining and protecting self-
10 worth (e.g., avoidance and self-handicapping) can sometimes undermine the
11 development of competence (Crocker & Park, 2004; Kernis, 2003). Clearly, while
12 this dimension of perfectionism may act positively to energise achievement
13 striving in an attempt to establish self-worth, it may in some circumstances lead to
14 self-defeating behaviours. In support of this possibility, a number of studies have
15 found individuals higher in self-oriented perfectionism employ various self-
16 handicapping behaviours in order to protect self-worth when they perceive either a
17 lack of control over successful outcomes (Hobden & Pliner, 1995) or experience
18 failure (Doebler, Schnick, Beck, & Astor-Stetson, 2000).

19 When contrasted with self-oriented perfectionism, subtle differences in the
20 contingencies of self-worth associated with socially prescribed perfectionism may
21 help to explain why this form of perfectionism is considered to be especially
22 debilitating. In the present study, the findings revealed that socially prescribed
23 perfectionism was not associated with a generalised competence based
24 contingency of self-worth, but with a contingent self-worth that is based upon the

1 demonstration of comparative superiority and the perceived receipt of approval
2 from significant others. Seeking the approval of others is suggested to be an
3 especially problematic strategy to establish a sense of self-worth, especially when
4 the approval of generalised others is sought rather than the approval of any
5 specific individual or group (Crocker & Park, 2004). Consequently, the inability
6 to satisfy this contingency is likely to be a significant source of the negative
7 psychological consequences associated with socially prescribed perfectionism.
8 There is also reason to suspect that this contingency may be especially
9 problematic for those with higher levels of socially prescribed perfectionism. This
10 is because socially prescribed perfectionism entails both negative perceptions of
11 interpersonal relationships and problematic interpersonal behaviours. These
12 include perceptions of lower personal social skills (Flett, Hewitt, & De Rosa,
13 1996), perceptions of higher frequency of negative social interactions (Flett,
14 Hewitt, Garshowitz & Martin, 1997), general hostile-dominant characteristics
15 (Hill, McIntire, & Bacharach, 1997), as well as over-controlling and conflict
16 oriented coping behaviours in close relationships (Haring, Hewitt, & Flett, 2003).
17 Consequently, while socially prescribed perfectionism entails a strong desire for
18 the approval of others, it is also associated with behaviours that are likely to
19 undermine those positive interpersonal relationships which may aid in bringing
20 about such approval.

21 One of the central tenets of Crocker's model is that while contingencies of
22 self-worth represent important psychological vulnerabilities (Crocker, 2002),
23 some contingencies render individuals more vulnerable to maladjustment than
24 others. Because self-oriented and socially prescribed perfectionism are associated

1 with contingencies of self-worth, the perceived need to defend, maintain and
2 enhance self-worth is likely to place strain on the cognitive, emotional and
3 physical resources of those with higher levels of either of these dimensions of
4 perfectionism (see Kernis, 2003). However, because the contingencies of worth
5 associated with self-oriented perfectionism entail a greater degree of personal
6 control, they are likely to be comparatively easier to satisfy. This is because
7 internal contingencies entail a greater degree of personal control (Crocker, 2002;
8 Crocker & Wolfe, 2001). As a consequence, they are purported to provide a more
9 stable sense of self-esteem and lead to fewer psychological difficulties than
10 external contingencies (see also Kernis, 2003). External contingencies are both
11 more difficult to satisfy and maintain, and are perceived to need to be pursued
12 more frequently and intensely (Crocker & Park, 2004). They are also associated
13 with greater labile self-esteem and poorer adjustment (see also Kernis, 2003).
14 Therefore, differences in the contingencies of self-worth that underlie self-
15 oriented and socially prescribed perfectionism may in part explain the divergent
16 consequences that have been observed by research examining their consequences.

17 *Limitations and future directions*

18 The findings of the current study must be considered in context of the
19 studies limitations. The current study measured only a small number of domain
20 contingencies. Those selected were considered to be the most important in terms
21 of distinguishing between self-oriented and socially prescribed perfectionism but
22 it is possible that differences may be evident across other domains in which self-
23 worth is staked (e.g., physical appearance, affection of family, admiration from
24 peers). Future research may wish to examine this possibility. The measure used to

1 assess self-worth based on generalised self-competence was constructed
2 specifically for this study. Although the items were taken from an established
3 measure, the psychometric properties of the scale are unclear. Therefore, the
4 findings involving this scale should be interpreted cautiously. As the findings of
5 the study provide an initial indication that specific contingencies of self-worth
6 may be useful when attempting to understand the consequences of self-oriented
7 and socially prescribed perfectionism, future research may wish to examine their
8 role further. Specific contingencies of self-worth may mediate between
9 perfectionism and various outcomes in the same manner in which global measures
10 of contingent self-worth do (e.g., Hill et al., 2008; Scott, 2007; Sturman et al.,
11 2009). In turn, future research may also wish to examine the incremental
12 predictive ability of specific versus global measures in explaining the
13 consequences of perfectionism. This is important to develop a parsimonious
14 account of the relationship between perfectionism, contingent self-worth and
15 psychological maladjustment.

16

17

18

19

20

21

22

23

24

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

References

- Blankstein, K. R., Lumley, C. H., & Crawford, A. (2007). Perfectionism, hopelessness, and suicide ideation: Revisions to diathesis-stress and specific vulnerability models. *Journal of Rational-Emotive & Cognitive-Therapy, 4*, 255-277.
- Crocker, J. (2002). The costs of seeking self-esteem. *Journal of Social Issues, 3*, 597-615.
- Crocker, J., Luhtanen, R. K., Cooper, M. L., & Bouvrett, A. (2003). Contingencies of self-worth in college students: Theory and Measurement. *Journal of Personality and Social Psychology, 85*, 894-908.
- Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin, 130*, 392-414.
- Crocker, J., & Wolfe, C. T. (2001). Contingencies of self-worth. *Psychological Review, 108*, 593-623.
- Deci, E. L., & Ryan, R. M. (1995). *Human autonomy: The basis for true self-esteem*. In M. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 31-50). New York: Plenum.
- Doebler, T. C, Schnick, C., Beck., B. L. & Astor-Stetson, E. (2000). Ego protection: The effects perfectionism and gender on acquired and claimed self-handicapping and self-esteem. *College Student Journal, 34*, 524-537.

- 1 Ellis, A. (2003). The relationship of rational-emotive behavior therapy (REBT) to
2 social psychology. *Journal of Rational-Emotive & Cognitive-Behavior*
3 *Therapy, 21*, 5-20.
- 4 Enns, M. W., Cox, B. J., Sareen, J. & Freeman, P. (2001). Adaptive and
5 maladaptive perfectionism in medical students: A longitudinal
6 investigation. *Medical Education, 35*, 1034-1042.
- 7 Flett, G. L., Besser, A., Davis, R. A., & Hewitt, P., L. (2003). Dimensions of
8 perfectionism, unconditional self-acceptance, and depression. *Journal of*
9 *Rational Emotive and Cognitive Behavior Therapy, 21*, 119-138.
- 10 Flett, G. L., & Hewitt, P. L. (2007). When does conscientiousness become
11 perfectionism. *Current Psychiatry, 6*, 49-64.
- 12 Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Dynin, C. B. (1994). Dimensions
13 of perfectionism and Type A behaviour. *Personality and Individual*
14 *Differences, 16*, 477-485.
- 15 Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Mosher, S. W. (1995).
16 Perfectionism, life events, and depressive symptoms: A test of a diathesis-
17 stress model. *Current Psychology: Research and Reviews, 14*, 112-137.
- 18 Flett, G. L., Hewitt, P. L., & De Rosa, T. (1996). Dimensions of perfectionism,
19 psychosocial adjustment and social skills. *Personality and Individual*
20 *Differences, 20*, 143-150.
- 21 Flett, G. L., Hewitt, P. L., Garshowitz, M., & Martin, T. R. (1997). Personality,
22 negative social interactions, and depressive symptoms. *Canadian Journal*
23 *of Behavioural Science 29*, 28-37.

- 1 Flett, G. L., Russo, F. A., & Hewitt, P. L. (1994). Dimensions of perfectionism
2 and constructive thinking as a coping response. *Journal of Rational-*
3 *Emotive and Cognitive-Behaviour Therapy, 12*, 163-179.
- 4 Graham, J.W., Cumsille, P.E. & Elek-Fisk, E. (2003) Methods for handling
5 missing data. In Schinka, J.A. and Velicer, W.F. (eds.), *Research Methods*
6 *in Psychology*, (pp.87-112). New York: Wiley.
- 7 Gilbert, P., Durrant, R., & McEwan. K. (2006). Investigating relationships
8 between perfectionism, forms and functions of self-criticism, and
9 sensitivity to put-down. *Personality and Individuals Differences, 41*, 1299-
10 1308.
- 11 Haring, M., Hewitt, P. L., & Flett, G. L. (2003). Perfectionism, coping, and
12 quality of intimate relationships. *Journal of Marriage and Family, 65*,
13 143-158.
- 14 Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts:
15 Conceptualization, assessment, and association with psychopathology.
16 *Journal of Personality and Social Psychology, 60*, 456-470.
- 17 Hewitt, P. L. & Flett, G. L. (1996). Personality traits and the coping process. In
18 M. Zeidner and N. S. Endler (Eds.), *Handbook of coping. Theory,*
19 *research, applications* (pp.410-433). New York: Wiley.
- 20 Hewitt, P.L., & Flett, G.L. (2004). *The Multidimensional Perfectionism Scale:*
21 *Technical Manual*. Toronto: Multihealth Systems Inc.
- 22 Hill, A. P., Hall, H. K., Appleton, P, R., & Kozub, S. R. (2008). Perfectionism and
23 burnout in junior elite soccer players: The mediating influence of

- 1 unconditional self-acceptance. *Psychology of Sport and Exercise*, 9, 630-
2 644.
- 3 Hill, R. W., McIntire, K., & Bacharach, V. R. (1997). Perfectionism and the big
4 five factors. *Journal of Social Behaviour and Personality*, 12, 257-270.
- 5 Hobden, K., & Pliner, P. (1995). Self-handicapping and dimensions of
6 perfectionism: Self-presentation vs. self-protection. *Journal of Research in*
7 *Personality*, 29, 461-474.
- 8 Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem.
9 *Psychological Inquiry*, 14, 1-26.
- 10 Knee, C. R., Canevello, A., Bush, A. L., & Cook, A. (2008). Relationship-
11 contingent self-esteem and the ups and downs of romantic relationships.
12 *Journal of Personality and Social Psychology*, 95, 608-627.
- 13 Loewenthal, K. M. (2001). *An introduction to psychological tests and scales*.
14 London: UCL Press.
- 15 O'Connor, R. C., & O'Connor, D. B. (2003). Predicting Hopelessness and
16 psychological distress: the role of perfectionism and coping. *Journal of*
17 *Counselling Psychology*, 50, 362-372.
- 18 Paradise, A. W. & Kernis, M. H. (1999). Development of the contingent self-
19 esteem scale. Unpublished data, University of Georgia.
- 20 Patrick, H., Neighbors, C., & Knee, C.R. (2004). Appearance -related social
21 comparisons: The role of contingent self-esteem and perceptions of
22 attractiveness. *Personality and Social Psychology Bulletin*, 30, 501-514.
- 23 Rice, K. G., & Lapsley, D. K. (2001). Perfectionism, coping and emotional
24 adjustment. *Journal of College Student Development*, 42, 157-168.

- 1 Rice, K. G., Vergara, D. T., & Mirela. A. A. (2006). Cognitive-affective
2 mediators of perfectionism and college student adjustment. *Personality
3 and Individual Differences, 40*, 463-473.
- 4 Rogers, C. R. (1996). *Client-centred therapy*. Bury St Edmunds: St Edmunds-bury
5 Press.
- 6 Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ:
7 Princeton University Press.
- 8 Scott, J. (2007). The effect of perfectionism and unconditional self-acceptance on
9 depression. *Journal of Rational-Emotive & Cognitive-Behavior Therapy,*
10 *25*, 35-65.
- 11 Sherry, S. B., Hewitt, P. L., Flett, G. L., & Harvey, M. (2003). Perfectionism
12 dimensions, perfectionistic attitudes, dependent attitudes, and depression
13 in psychiatric patients and university students. *Journal of Counseling
14 Psychology, 50*, 373-386.
- 15 Spiers Neumeister, K. L., & Finch, H. (2006). Perfectionism in high-ability
16 students: Relational precursors and influences on achievement motivation.
17 *Gifted Child Quarterly, 50*, 238-251.
- 18 Stoeber, J., Kempe, T., & Keogh, E. J. (2008). Facets of self-oriented and socially
19 prescribed perfectionism: Does striving for perfectionism enhance or
20 undermine performance. *Personality and Individual Differences, 44*, 1506-
21 1516.
- 22 Stoeber, J. & Stoeber, F. S. (2009). Domains of perfectionism: Prevalence and
23 relationships with perfectionism, gender, age, and satisfaction with life.
24 *Personality and Individual Differences, 46*, 530-535.

- 1 Sturman, E. D., Flett, G. L., Hewitt, P. L., & Rudolph, S.G. (2009). Dimensions of
2 perfectionism and self-worth contingencies in depression. *Journal of*
3 *Rational-Emotive & Cognitive-Behavior Therapy*, 27, 213-231.
- 4 Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th ed.).
5 Boston: Allyn and Bacon.
- 6 Trumpeter, N., Watson, P. J., & O' Leary. B. J. (2006). Factors within
7 multidimensional perfectionism scales: Complexity of relationship with
8 self-esteem, narcissism, self-control and self-criticism. *Personality and*
9 *Individuals Differences*, 41, 849-860.
- 10 Van Yperen, N., W. (2006). A novel approach to assessing achievement goals in
11 the context of the 2 x2 framework: Identifying distinct profiles of
12 individuals with different dominant achievement goals. *Personality and*
13 *Social Psychology Bulletin*, 32, 1432-1445.
- 14
15
16
17
18
19
20
21
22
23

Table 1 *Descriptive statistics and internal reliability coefficients for dimensions of perfectionism and contingencies of self-worth*

Variable	Likert scale	<i>M</i>	<i>SD</i>	α
1. Self-oriented perfectionism	1-7	4.67	0.76	.82
2. Socially prescribed perfectionism	1-7	3.62	0.62	.71
3. Self-worth contingent on outperforming others	1-7	4.54	1.02	.82
4. Self-worth contingent on others' approval	1-7	3.80	1.19	.72
5. Self-worth contingent on personal competence	1-5	3.43	0.61	.60

Table 2 *The prediction of self-oriented and socially prescribed perfectionism using contingencies of self-worth*

Criterion Variable	Predictor variables	<i>F</i>	df	<i>R</i> ²	Adjusted <i>R</i> ²	β	<i>t</i>
Socially prescribed perfectionism		13.62**	3, 235	.15	.14		
	Outperforming others					.27	4.90**
	Approval of others					.15	2.25**
	Personal competence					.10	1.38**
Self-oriented perfectionism		10.12**	3, 235	.11	.10		
	Outperforming others					.23	3.25***
	Approval of others					-.05	-0.74***
	Personal competence					.18	2.35***

** $p < .01$ * $p < .05$